Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A method of reducing inflammation in a patient, comprising:
identifying a patient suffering from or at risk for inflammation; and
administering to the patient at least one treatment selected from the group consisting of: inducing ferritin in the patient; expressing ferritin in the patient; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, iron, desferoxamine, salicylaldehyde isonicotinoyl hydrazone, iron dextran, or apoferritin to the patient, in an amount sufficient to reduce inflammation.

2. (Original) The method of claim 1, wherein the treatment is inducing ferritin in the patient.

3. (Original) The method of claim 1, wherein the treatment is expressing ferritin in the patient.

4. (Original) The method of claim 1, wherein the treatment is administering a pharmaceutical composition comprising HO-1 to the patient.

5. (Original) The method of claim 1, wherein the treatment is administering a pharmaceutical composition comprising biliverdin to the patient.

6. (Original) The method of claim 5, wherein the pharmaceutical composition is administered to the patient at a dosage of about 1 to 1000 micromoles/kg/day.

7. (Original) The method of claim 6, wherein the inflammation is associated with ulcerative colitis.

8. (Original) The method of claim 1, wherein the treatment is administering a pharmaceutical composition comprising bilirubin to the patient.

9. (Original) The method of claim 1, wherein the treatment is administering a pharmaceutical composition comprising ferritin to the patient.

10. (Original) The method of claim 1, wherein the treatment is administering a pharmaceutical composition comprising desferoxamine (DFO) or salicylaldehyde isonicotinoyl hydrazone (SIH) to the patient.

11. (Original) The method of claim 1, wherein the treatment is administering a pharmaceutical composition comprising iron dextran to the patient.

12. (Original) The method of claim 1, wherein the treatment is administering a pharmaceutical composition comprising apoferritin to the patient.

13. (Original) The method of claim 2, wherein the ferritin is induced by administering iron to the patient.

14. (Original) The method of claim 1, wherein the inflammation is associated with a condition selected from the group consisting of: asthma, adult respiratory distress syndrome, interstitial pulmonary fibrosis, pulmonary emboli, chronic obstructive pulmonary disease,

primary pulmonary hypertension, chronic pulmonary emphysema, congestive heart failure, peripheral vascular disease, stroke, atherosclerosis, ischemia-reperfusion injury, heart attacks, glomerulonephritis, conditions involving inflammation of the kidney, infection of the genitourinary tract, viral and toxic hepatitis, cirrhosis, ileus, necrotizing enterocolitis, specific and non-specific inflammatory bowel disease, rheumatoid arthritis, deficient wound healing, Alzheimer's disease, Parkinson's disease, graft versus host disease, and hemorrhagic, septic, or anaphylactic shock.

15. (Original) The method of claim 1, wherein the inflammation is inflammation of the heart, lung, liver, spleen, brain, skin, and/or kidney.

16. (Original) The method of claim 1, wherein the inflammation is an inflammatory condition localized in the gastrointestinal tract.

17. (Original) The method of claim 16, wherein the inflammatory condition is selected from the group consisting of: amoebic dysentery, bacillary dysentery, schistosomiasis, campylobacter enterocolitis, yersinia enterocolitis, enterobius vermicularis, radiation enterocolitis, ischaemic colitis, eosinophilic gastroenteritis, ulcerative colitis, indeterminate colitis, and Crohn's disease.

18. (Original) The method of claim 17, wherein the inflammatory condition is ulcerative colitis.

19. (Original) The method of claim 1, further comprising the step of administering to the patient at least one treatment selected from the group consisting of: inducing HO-1 in the patient; expressing HO-1 in the patient; and administering a pharmaceutical composition comprising carbon monoxide to the patient.

20. (Original) The method of claim 1, further comprising the steps of inducing HO-1 in the patient, and administering a pharmaceutical composition comprising carbon monoxide to the patient.

21. (Original) A method of transplanting an organ, the method comprising:

(a) administering to a donor at least one treatment selected from the group consisting of: inducing ferritin in the donor; expressing ferritin in the donor; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, desferoxamine, iron dextran, or apoferritin to the donor;

(b) obtaining an organ from the donor; and

(c) transplanting the organ into a recipient, wherein the treatment administered in step (a) is sufficient to enhance survival or function of the organ after transplantation into the recipient.

22. (Original) A method of transplanting an organ, the method comprising:

(a) providing an organ of a donor;

(b) administering to the organ *ex vivo* at least one treatment selected from the group consisting of: inducing ferritin in the organ; expressing ferritin in the organ; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, desferoxamine, iron dextran, or apoferritin; and

(c) transplanting the organ into a recipient, wherein treatment administered to the organ in step (b) is sufficient to enhance survival or function of the organ after transplantation of the organ to the recipient.

23. (Original) The method of transplanting an organ, the method comprising:

(a) providing an organ from a donor;

(b) transplanting the organ into a recipient; and

(c) before, during, or after step (b), administering to the recipient at least one treatment selected from the group consisting of: inducing ferritin in the recipient; expressing ferritin in the

recipient; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, desferoxamine, iron dextran, or apoferritin to the recipient, wherein the treatment administered to the recipient in step (c) is sufficient to enhance survival or function of the organ after transplantation of the organ to the recipient.

24. (Original) The method of claim 21, further comprising the step of administering to the donor at least one treatment selected from the group consisting of: inducing HO-1 in the donor; expressing HO-1 in the donor; and administering a pharmaceutical composition comprising carbon monoxide to the donor.

25. (Original) The method of claim 21, further comprising the steps of inducing HO-1 in the donor, and administering a pharmaceutical composition comprising carbon monoxide to the donor.

26. (Original) The method of claim 22, further comprising the step of administering to the patient at least one treatment selected from the group consisting of: inducing HO-1 in the organ; expressing HO-1 in the organ; and administering a pharmaceutical composition comprising carbon monoxide to the organ.

27. (Original) The method of claim 22, further comprising the steps of inducing HO-1 in the organ and administering a pharmaceutical composition comprising carbon monoxide to the organ.

28. (Original) The method of claim 23, further comprising the step of administering to the patient at least one treatment selected from the group consisting of: inducing HO-1 in the recipient; expressing HO-1 in the recipient; and administering a pharmaceutical composition comprising carbon monoxide to the recipient.

29. (Original) The method of claim 23, further comprising the steps of inducing HO-1 in the recipient, and administering a pharmaceutical composition comprising carbon monoxide to the recipient.

30. (Original) A method of performing angioplasty on a patient, comprising:

(a) performing angioplasty on the patient; and

(b) before, during, or after the performing step, administering at least one treatment selected from the group consisting of: inducing ferritin in the patient; expressing ferritin in the patient; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, desferoxamine, iron dextran, or apoferritin to the patient.

31. (Original) The method of claim 30, further comprising the step of administering to the patient at least one treatment selected from the group consisting of: inducing HO-1 in the patient; expressing HO-1 in the patient; and administering a pharmaceutical composition comprising carbon monoxide to the patient.

32. (Original) The method of claim 30, further comprising the steps of inducing HO-1 in the patient and administering a pharmaceutical composition comprising carbon monoxide to the patient.

33. (Original) A method of performing vascular surgery on a patient, comprising:

(a) performing vascular surgery on the patient; and

(b) before, during, or after the performing step, administering at least one treatment selected from the group consisting of: inducing HO-1 or ferritin in the patient; expressing HO-1 or ferritin in the patient; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, desferoxamine, iron dextran, or apoferritin to the patient.

34. (Original) The method of claim 33, further comprising the step of administering to the patient at least one treatment selected from the group consisting of: inducing HO-1 in the patient; expressing HO-1 in the patient; and administering a pharmaceutical composition comprising carbon monoxide to the patient.

35. (Original) The method of claim 33, further comprising the steps of inducing HO-1 in the patient and administering a pharmaceutical composition comprising carbon monoxide in the patient.

36. (Original) A method of treating a cellular proliferative and/or differentiative disorder in a patient, comprising:
identifying a patient suffering from or at risk for a cellular proliferative and/or differentiative disorder; and

administering to the patient at least one treatment selected from the group consisting of: inducing ferritin in the patient; expressing ferritin in the patient; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, iron, desferoxamine, iron dextran, or apoferritin to the patient, in an amount sufficient to treat the cellular proliferative and/or differentiative disorder.

37. (Original) The method of claim 36, further comprising the step of administering to the patient at least one treatment selected from the group consisting of: inducing HO-1 in the patient; expressing HO-1 in the patient; and administering a pharmaceutical composition comprising carbon monoxide to the patient.

38. (Original) The method of claim 36, further comprising the steps of inducing HO-1 in the patient and administering a pharmaceutical composition comprising carbon monoxide in the patient.

39. (Original) A method of reducing the effects of ischemia in a patient, comprising: identifying a patient suffering from or at risk for ischemia; and

administering to the patient at least one treatment selected from the group consisting of: inducing ferritin in the patient; expressing ferritin in the patient; and administering a pharmaceutical composition comprising HO-1, bilirubin, biliverdin, ferritin, iron, desferoxamine, iron dextran, or apoferritin to the patient, in an amount sufficient to reduce the effects of ischemia.

40. (Original) The method of claim 40, further comprising the step of administering to the patient at least one treatment selected from the group consisting of: inducing HO-1 in the patient; expressing HO-1 in the patient; and administering a pharmaceutical composition comprising carbon monoxide to the patient.

41. (Original) The method of claim 40, further comprising the steps of inducing HO-1 in the patient, and administering a pharmaceutical composition comprising carbon monoxide to the patient.

42. (New) A method of treating atherosclerosis, the method comprising:

identifying an individual suffering from or at risk atherosclerosis; and

administering to the individual a pharmaceutical composition comprising biliverdin, bilirubin or a mixture thereof in an amount sufficient to treat atherosclerosis.

43. (New) The method of claim 42, wherein the pharmaceutical composition is suitable for oral administration.

44. (New) The method of claim 43, wherein the pharmaceutical composition is in tablet or capsule form.

45. (New) The method of claim 42, wherein the pharmaceutical composition is a controlled release formulation.

46. (New) The method of claim 42, wherein the pharmaceutical composition is administered to the individual at least once per day.

47. (New) The method of claim 42, wherein the pharmaceutical composition is administered to the individual several times per day.

48. (New) The method of claim 42, wherein the pharmaceutical composition comprises biliverdin.

49. (New) The method of claim 48, wherein the pharmaceutical composition is administered to the individual in a dose of about 1 to 1000 μmol/kg/day.

50. (New) The method of claim 42, wherein the pharmaceutical composition comprises bilirubin.

51. (New) The method of claim 50, wherein the pharmaceutical composition is administered to the individual in a dose of about 1 to 1000 mg/kg/day.

52. (New) The method of claim 42, wherein the pharmaceutical composition comprises a mixture of bilirubin and biliverdin.

53. (New) The method of claim 42, wherein the pharmaceutical composition is suitable for transdermal or transmucosal administration.

54. (New) A pharmaceutical composition in tablet or capsule form comprising biliverdin, bilirubin or a mixture thereof.

55. (New) The pharmaceutical composition of claim 54, wherein the pharmaceutical composition is a controlled release formulation.

56. (New) A pharmaceutical composition in a form suitable for transmucosal or transdermal administration comprising biliverdin, bilirubin or a mixture thereof.

57. (New) The pharmaceutical composition of claim 56, wherein the composition is in nasal spray or suppository form.

58. (New) The pharmaceutical composition of claim 56, wherein the composition is in ointment, salve, gel or cream form.